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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,517	08/20/2001	Masaru Mizutani	6116.61001	5946
7590	05/19/2004		EXAMINER	
Antonio R. Durando Durando Birdwell & Janke, P.L.C. 2929 E. Broadway Blvd. Tucson, AZ 85716				MAYO, TARA L
		ART UNIT	PAPER NUMBER	3671

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/933,517	MIZUTANI, MASARU	
	Examiner Tara L. Mayo	Art Unit 3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 8-44 is/are pending in the application.
- 4a) Of the above claim(s) 30-43 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 8-29 44 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 20 August 2001 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>6</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION

1. The indicated allowability of claims 8 through 29 is withdrawn in view of the newly discovered reference(s) to Meilahn (U.S. Patent No. 5,762,024A). Rejections based on the newly cited reference(s) follow.

2. As courtesy to Applicant, the Office herein withdraws the cancellation of claims 30 through 44 set forth in the Examiner's Amendment attached to the Notice of Allowability (paper no. 13) mailed 21 March 2003.

Election/Restrictions

3. Applicant's election of Species A in Paper No. 9 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

4. Claims 30 through 43 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 9.

Information Disclosure Statement

5. The Information Disclosure Statement (paper no. 6) filed 27 June 2002 has been lined through because the Examiner has already considered the references cited therein.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 8 through 10, 16, 18, 22, 24, 28, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of *The Application of Deep Sea Water in Japan*.

Meilahn '024, as seen in Figures 1 through 12, shows a seawater pool comprising:
with regard to claim 8,
a pool structure (24) floating on a sea (26; col. 3, lines 30 through 32); and
means for collecting and supplying seawater (39) to the pool structure;

with regard to claim 9,
further comprising means for mooring (25) the pool structure at a fixed location;

with regard to claim 10,
wherein the means for mooring includes an anchor (29);

with regard to claim 16,
further comprising means for draining the water (47) from the pool structure;

with regard to claim 18,

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further comprising a facility (56) for enabling fishing from a side of the pool structure; with regard to claim 28,

the means for collecting and supplying seawater including an intake pipe (41); and with regard to claim 44,

a pool structure (24); and

means for collecting and supplying seawater (39) to the pool structure.

Meilahn '024 discloses all of the features of the claimed invention with the exception(s) of:

with regard to claims 8 and 44,

means for collecting and supplying seawater being capable of collecting and supplying deep-sea water;

with regard to claim 22,

means for solar power generation;

with regard to claim 24,

means for wind power generation; and

with regard to claim 28,

the means for collecting and supplying deep-sea water to the pool structure including a check valve which only allows an upward flow of the deep-sea water.

The Application of Deep Sea Water in Japan discloses the establishment of deep-sea water pumping systems in Kochi Prefecture in 1989 for the purposes of research in the

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cultivation of marine resources including aquaculture and product development. The advantages of deep-sea water taught by the references include the ability to culture cold-water organisms and deep-ocean organisms in tropical areas, ease at which water temperature can be controlled by mixing surface water with deep-sea water, and disease control (there are few viruses and pathogenic bacteria in deep sea water).

With regard to claims 8 and 44, it would have been obvious to one of ordinary skill in the art of animal husbandry at the time of invention to modify the means for collecting supplying shown by Meilahn '024 such that it would comprise a deep-sea water pumping system as suggested by *The Application of Deep Sea Water in Japan*. The motivation would have been to cultivate cold-water organisms in the pool structure.

With regard to claims 22 and 24, it is a well-known expedient in the art of power generation to use solar and wind energy to operate domestic and industrial facilities. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify the device disclosed by the combination of Meilahn '024 and *The Application of Deep Sea Water in Japan* such that it would include means for generating solar or wind power. The motivation would have been to include a cost efficient energy source.

With regard to claim 29, it would have been obvious to one of ordinary skill in the art of fluid handling at the time of invention to modify the device shown by the combination of Meilahn '024 and *The Application of Deep Sea Water in Japan* such that the means for

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collecting and supplying deep-sea water would include a check valve on the intake pipe. The motivation would have been to prevent loss of water from the pool structure.

8. Claims 11 through 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of *The Application of Deep Sea Water in Japan* as applied to claims 8 and 9 above, and further in view of Mougin (U.S. Patent No. 4,166,363).

Meilahn '024 in view of *The Application of Deep Sea Water in Japan* discloses all of the features of the claimed invention with the exception(s) of:

with regard to claims 11 and 12,

a propulsion device; and

with regard to claim 13,

the propulsion device including a propeller.

Mougin '363, as seen in Figures 1 through 3, shows a floating pool structure provided with a propeller (3) for driving the same.

With regard to claims 11 through 13, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to modify the device shown by Meilahn '024 in view of *The Application of Deep Sea Water in Japan* such that it would

include a propulsion unit as taught by Mougin '363. The motivation would have been to facilitate relocation of the pool structure within a body of water.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable Meilahn (U.S. Patent No. 5,762,024) in view of *The Application of Deep Sea Water in Japan* as applied to claim 8 above, and further in view of O'Hare (U.S. Patent No. 5,669,330).

Meilahn '024 in view of *The Application of Deep Sea Water in Japan* discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 14,

a plurality of extensions protruding from the pool structure.

O'Hare '330, as seen in Fig. 1, shows an aquatic organism habitat device (10) comprising a plurality of extensions (17) protruding from the bottom of horizontal member (11) attached to a preexisting bulkhead (12) for encouraging and supporting aquatic growth of marine organisms.

With regard to claim 14, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to modify the device disclosed by Meilahn '024 in view of *The Application of Deep Sea Water in Japan* such that it would include a plurality of extensions as taught by O'Hare '330. The motivation would have been to dually provide a pool structure capable of supporting aquatic life on its exterior.

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10. Claims 15, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of *The Application of Deep Sea Water in Japan* and Mougin (U.S. Patent No. 4,166,363) as applied to claim 12 above, and further in view of O'Hare (U.S. Patent No. 5,669,330).

Meilahn '024 further discloses:

with regard to claim 17,

means for draining the deep sea water (47) from the pool structure; and

with regard to claim 19,

a facility (56) for enabling fishing from a side of the pool structure.

Meilahn '024 in view of *The Application of Deep Sea Water in Japan* and Mougin '363 discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 15,

a plurality of extensions protruding from the pool structure.

O'Hare '330, as seen in Fig. 1, shows an aquatic organism habitat device (10) comprising a plurality of extensions (17) protruding from the bottom of horizontal member (11) attached to a preexisting bulkhead (12) for encouraging and supporting aquatic growth of marine organisms.

With regard to claim 15, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to further modify the device disclosed by Meilahn '024 in view of *The Application of Deep Sea Water in Japan* and Mougin '363 such that it would include a plurality of extensions as taught by O'Hare '330. The motivation would have been to dually provide a pool structure capable of supporting aquatic life on its exterior.

11. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of *The Application of Deep Sea Water in Japan* as applied to claim 8 above, and further in view of Puncochar (U.S. Patent No. 3,571,819).

Meilahn '024 in view of *The Application of Deep Sea Water in Japan* further teaches the desirability of aeration in the tanks (col. 5, lines 26 and 30) and discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 20,

means for generating and mixing air bubbles into the deep-sea water supplied to the pool.

Puncochar '819, as seen in Figs. 1 through 3, discloses a floating pool structure comprising means for generating and mixing air bubbles (24) into the deep-sea water supplied to the pool structure for preventing the ingress of unwanted sea organisms (col. 1, lines 21 through 35).

With regard to claim 20, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to modify the device shown by Meilahn '024 in view of *The Application of Deep Sea Water in Japan* such that it would include means for generating and mixing air bubbles into the deep-sea water supplied to the pool structure as taught by Puncochar '819. The motivation would have been to stimulate the growth of aquatic life in the pool structure.

12. Claims 21, 23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of *The Application of Deep Sea Water in Japan*, Mougin (U.S. Patent No. 4,166,363), and O'Hare (U.S. Patent No. 5,669,330) as applied to claim 19 above, and further in view of Puncochar (U.S. Patent No. 3,571,819).

Meilahn '024 in view of *The Application of Deep Sea Water in Japan*, Mougin '363, and O'Hare '330 teaches the desirability of aeration in the tanks (col. 5, lines 26 and 30) and discloses all of the features of the claimed invention the exception(s) of:
with regard to claim 21,

means for generating and mixing air bubbles into the deep-sea water supplied to the pool;

with regard to claim 23,

means for solar power generation; and

with regard to claim 25,

means for wind power generation.

Puncochar '819, as seen in Figs. 1 through 3, discloses a floating pool structure comprising means for generating and mixing air bubbles (24) into the deep-sea water supplied to the pool structure for preventing the ingress of unwanted sea organisms (col. 1, lines 21 through 35).

With regard to claim 21, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to modify the device shown by Meilahn '024 in view of *The Application of Deep Sea Water in Japan*, Mougin '363, and O'Hare '330 such that it would include means for generating and mixing air bubbles into the deep-sea water supplied to the pool structure as taught by Puncochar '819. The motivation would have been to stimulate the growth of aquatic life in the pool structure.

With regard to claims 23 and 25, it is a well-known expedient in the art of power generation to use solar and wind energy to operate domestic and industrial facilities. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify the device disclosed by the combination of Meilahn '024, *The Application of Deep Sea Water in Japan*, Mougin '363, O'Hare '330, and Puncochar '819 such that it would include means for generating solar power. The motivation would have been to include a cost efficient energy source.

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13. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of *The Application of Deep Sea Water in Japan* as applied to claim 8 above, and further in view of Atwell (U.S. Patent No. 4,536,257).

Meilahn '024 in view of *The Application of Deep Sea Water in Japan* discloses all of the features of the claimed invention with the exception(s) of:
with regard to claim 26,

a seawater desalination plant.

Atwell '257 discloses a desalination system for providing potable water.

With regard to claim 26, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to further modify the device shown by the combination of Meilahn '024 and *The Application of Deep Sea Water in Japan* such that it would include a desalination system as taught by Atwell '257. The motivation would have been to provide a potable source of water on the apparatus.

14. Claims 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meilahn (U.S. Patent No. 5,762,024) in view of *The Application of Deep Sea Water in Japan*, Mougin (U.S. Patent No. 4,166,363), O'Hare (U.S. Patent No. 5,669,330), and Puncochar (U.S. Patent No. 3,571,819) as applied to claim 25 above, and further in view of Atwell (U.S. Patent No. 4,536,257).

Meilahn '024 further discloses:

with regard to claim 29,

the means for collecting and supplying seawater including an intake pipe (41).

Meilahn '024 in view of *The Application of Deep Sea Water in Japan*, Mougin '363, O'Hare '330, and Puncochar '819 discloses all of the features of the claimed invention with the exception(s) of:

with regard to claim 27,

a seawater desalination plant; and

with regard to claim 29,

the means for collecting and supplying deep-sea water to the pool structure including a check valve which only allows an upward flow of the deep-sea water.

Atwell '257 discloses a desalination system for providing potable water.

With regard to claim 27, it would have been obvious to one of ordinary skill in the art of marine structures at the time of invention to further modify the device shown by the combination of Meilahn '024, *The Application of Deep Sea Water in Japan*, Mougin '363, O'Hare '330, and Puncochar '819 such that it would include a desalination system as taught by Atwell '257. The motivation would have been to provide a potable source of water on the apparatus.

With regard to claim 29, it would have been obvious to one of ordinary skill in the art of fluid handling at the time of invention to modify the device shown by the combination of Meilahn '024, *The Application of Deep Sea Water in Japan*, Mougin '363, O'Hare '330, Puncochar '819, and Atwell '257 such that the means for collecting and supplying deep-sea water would include a check valve on the intake pipe. The motivation would have been to prevent loss of water from the pool structure.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Foster et al. (U.S. Patent No. 6,044,798) disclose a floating aquaculture system comprising a plurality of submerged rearing units.

JLGC Newsletter Prefecture Today: Kochi Prefecture - Unmasking the Hidden Secrets of our Ocean Depths briefly discusses facilities of the Kochi Deep Sea Water Laboratory and benefits of deep-sea water.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tara L. Mayo whose telephone number is 703-305-3019. The examiner can normally be reached on Monday through Friday 8:30 AM to 5:00 PM.

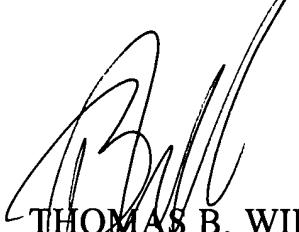
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on 703-308-3870. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TLM
3 March 2004



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